

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 14-17 and 19-27 are pending in the application, with claims 14, 20, 26, and 27 being the independent claims. Claim 18 is sought to be canceled without prejudice to or disclaimer of the subject matter therein. Claims 14 and 26 are sought to be amended. New claim 27 is sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested. Applicants reserve the right to prosecute similar or broader claims, with respect to the cancelled and amended claims, in the future.

These amendments should be entered after final because they include features similar to those recited in currently canceled claim 18, and therefore require no further search or consideration by the Examiner, and place the application in condition for allowance.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 14-16, 18-21, and 23-26

On page 4 of the Office Action, claims 14-16, 18-21, and 23-26 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,155,370 to Osawa *et al.* (hereinafter "Osawa"). Applicant respectfully traverses this rejection.

Reply to Office Action of April 23, 2008

Claim 18 has been canceled rendering its rejection moot. Claim 14 recites features that distinguish over the cited references. For example, claim 14 recites: "wherein the interferometer is configured to determine the position of the alignment mark using an interference pattern." Claims 20 and 26 also recite, in respective language, similar distinguishing features.

Osawa does not teach or suggest at least this feature of claims 14, 20, and 26. Osawa throughout teaches avoiding interference or an interferometer to perform any position measuring. For example, in col. 6; lines 29-30, Osawa notes (emphasis added):

From this it is seen that, with a broader spectral width and shorter wavelength, the prevention of interference is better,

Also, Osawa in col. 4, lines 40-42 teaches (emphasis added):

Such interference leads to a decrease in the signal-to-noise ratio of the sensor 8, resulting in a large reduction of the alignment accuracy.

Similarly, other parts of Osawa's disclosure teach, for example, at col. 2; line 20, col. 4; lines 28-30 and 36, col. 6; lines 29-30, and col. 13; lines 12-14, prevention of interference and problems associated with interference. Thus, Osawa by explicitly teaching the desire to avoid interference teaches away from claims 14, 20, and 26. See M.P.E.P. §§ 2141.02 and 2145(X)(D)(2); *Gillette Co. v. S.C. Johnson & Son, Inc.*, 919 F.2d 720, 16 U.S.P.Q.2d 1933 (Fed. Cir. 1990) (stating the closest prior art should not be used because the closest prior art "would likely discourage the art worker from attempting the substitution suggested by the [inventor/patentee]."); *In re Gurley*, 27 F.3d 551, 31 U.S.P.Q.3d 1130 (Fed. Cir. 1994) ("A reference may be said to teach away when a person of ordinary skill, upon reading the reference, ...would be led in a direction divergent from the path that was taken by the applicant.").

At least because Osawa's disclosure discourages use of interferometry or interference pattern for measuring, Osawa does not teach or suggest each and every element of claims 14, 20, and 26, and therefore does not render them obvious.

Accordingly, Applicant respectfully requests that this rejection be reconsidered and withdrawn, and that claims 14 and 20, and their respective dependent claims, and claim 26, be passed to allowance.

Claims 17 and 22

On page 14 of the Office Action, claims 17 and 22 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Osawa in view of U.S. Patent No. 4,821,277 to Alphonse et al. (hereinafter "Alphonse"). Applicant respectfully traverses this rejection.

Claims 17 and 22 depend from claims 14 and 20, respectively, and incorporate all features thereof, in addition to their additional distinguishing features. Alphonse is not being used to overcome the deficiencies Osawa with respect to claims 14 and 20, as presented above, and neither does Alphonse overcome those deficiencies. Accordingly, Applicant respectfully requests that this rejection be reconsidered and withdrawn, and that claims 17 and 22 be passed to allowance at least for the same reasons as claims 14 and 20, respectively, and further in view of their own distinguishing features.

New Claim 27

New claim 27 recites features similar to those found in currently canceled claim 18, and in previously presented claim 19, using respective language, and additional features that distinguish over the applied reference. For example, new claim 27 recites:

An interferometric measuring device, comprising:
a laser diode configured to generate a beam of radiation having a coherence length of about 0.1 to 0.5 mm and configured to direct the beam of radiation to reflect from a diffractive alignment target to form first and second beams that are out of phase with respect each other and that interfere with each other to form an interferogram, an interference pattern, or interference fringes; and
a sensor configured to receive the interferogram, the interference pattern, or the interference fringes and to generate an alignment signal therefrom,
wherein the beams of radiation being the about 0.1 to 0.5 mm provides for a substantial elimination of spurious or ghost reflections from optical elements within the system have widths greater than about 0.1 to 0.5 mm to reduce unwanted additional beams, caused by the spurious or ghost reflections, from interfering with the interferogram, the interference pattern, or the interferometric fringes

Osawa does not teach or suggest these features.

For example, Osawa, as discussed above, explicitly teaches away from using an interferometric measuring device or using an interferogram, an interference pattern, or interference fringes to measure.

Also, Osawa does not teach or suggest using “a laser diode configured to generate a beam of radiation having a coherence length of about 0.1 to 0.5mm.” Instead, Osawa teaches a laser (e.g., a He-Ne laser at col. 1, line 53) having a coherence length in the micron range, e.g., 40 microns (*see*, Osawa at col. 6, line 15). Such a level of

Reply to Office Action of April 23, 2008

magnitude difference is not trivial, and Osawa does not teach or suggest a coherence length in the millimeter range, as recited in claim 27.

At least for these reasons, claim 27 should be found allowable over the cited references

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

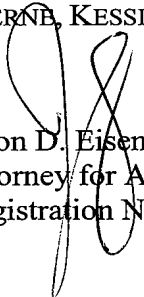
Reply to Office Action of April 23, 2008

J. Christian SWINDAL
Appl. No. 10/713,212

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.


Jason D. Eisenberg
Attorney for Applicant
Registration No. 43,447

Date: 6/23/08

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600
816360_1.DOC